

Appl. No. 10/049,230
Amdt. Dated 12/19/2003
Reply to Office Action of 09/23/2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (Canceled)

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Claim 8. (Currently Amended) Brush sealing ring for use as a sealing element between components which can move relative to one another, in particular between a rotor and a stator as an element which is fixed to the stator, having an annular housing and having a multiplicity of aramid fiber-based bristles which are attached within the housing and protrude radially or axially out of the contour of the housing and whose free end faces form tangents with an imaginary, rotationally symmetrical or planar face, the bristles being composed of sections of strands of aramid fibers which are present in a wound arrangement, each section individually running in a loop shape around a core extending away from it without crossing over in such a way that its two end faces form tangents with the same imaginary face which is spaced apart from the core, and the sections being arranged around the core in a plurality of layers one on top of the other and being secured in a fixed fashion with a clamping section, wherein the strands are composed exclusively of fine, angel hair-like

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2/ aramid fibers,

wherein the clamping section is prestressed by elastic cross-sectional widening, and

wherein sections of the strands are individually secured between the core and the clamping section exclusively by means of frictional locking which is dependent on an amount the clamping section is prestressed.

Claim 9. (Previously Presented) Brush sealing ring according to Claim 8, wherein the core is shaped from a metal wire with a round cross section and the clamping section is shaped from a metallic round tube which is slotted in the longitudinal direction.

Claim 10. (Previously Presented) Brush sealing ring according to Claim 8, wherein, in addition to their, essentially, radial or axial orientation, the sections have a directional component in the circumferential direction outside the clamping region.

Claim 11. (Previously Presented) Brush sealing ring according to Claim 9, wherein, in addition to their, essentially, radial or axial orientation, the sections have a directional component in the circumferential direction outside the clamping region.

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D) Claim 12. (Previously Presented) Brush sealing ring according to Claim 8, wherein the sections have end faces which are manufactured by mechanical cutting or shearing off, by laser beam cutting, if appropriate with water cooling ("laser micro jet process"), or by means of water jet cutting.

Claim 13. (Previously Presented) Brush sealing ring according to Claim 9, wherein the sections have end faces which are manufactured by mechanical cutting or shearing off, by laser beam cutting, if appropriate with water cooling ("laser micro jet process"), or by means of water jet cutting.

Claim 14. (Previously Presented) Brush sealing ring according to Claim 10, wherein the sections have end faces which are manufactured by mechanical cutting or shearing off, by laser beam cutting, if appropriate with water cooling ("laser micro jet process"), or by means of water jet cutting.

Claim 15. (Previously Presented) Brush sealing ring according to Claim 11, wherein the sections have end faces which are manufactured by mechanical cutting or shearing off, by laser beam cutting, if appropriate with water cooling ("laser micro jet process"), or by means of water jet cutting.

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D / Claims 16-19 (Canceled)

Claim 20. (Previously Presented) Use of a sealing ring according to Claim 8, wherein the sealing ring is configured for sealing predominantly gaseous fluids, including hydrogen.

Claim 21. (Previously Presented) Use of a sealing ring according to Claim 9, wherein the sealing ring is configured for sealing predominantly gaseous fluids, including hydrogen.

Claim 22. (Previously Presented) Use of a sealing ring according to Claim 10, wherein the sealing ring is configured for sealing predominantly gaseous fluids, including hydrogen.

Claim 23. (Previously Presented) Use of a sealing ring according to Claim 12, wherein the sealing ring is configured for sealing predominantly gaseous fluids, including hydrogen.

Claim 24. (Canceled)

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Claim 25. (Previously Presented) Use of a sealing ring according to Claim 8, wherein the sealing ring is configured for use in turbo machines of all kinds as well as in electric generators.

Claim 26. (Previously Presented) Use of a sealing ring according to Claim 9, wherein the sealing ring is configured for use in turbo machines of all kinds as well as in electric generators.

Claim 27. (Previously Presented) Use of a sealing ring according to Claim 10, wherein the sealing ring is configured for use in turbo machines of all kinds as well as in electric generators.

Claim 28. (Previously Presented) Use of a sealing ring according to Claim 12, wherein the sealing ring is configured for use in turbo machines of all kinds as well as in electric generators.

Claim 29. (Canceled)

Claim 30. (Previously Presented) Use of a sealing ring according to Claim 20, wherein the sealing ring is configured for use in turbo machines of all kinds as well as in electric generators.

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D/ Claim 31. (Currently Amended) A ~~bush~~ brush sealing ring for sealing a space between a rotor and a stator comprising:

- an annular housing fixed in use to said stator,
- a core carried by the annular housing, and
- a plurality of strand sections extending individually in a loop around the core and extending with end faces forming tangents with an annular face spaced from the core, and
- a clamp securing said strand sections to the core,
- wherein the strand sections are formed exclusively of fine, angel hair aramid fibers,
- wherein the clamp is prestressed by elastic cross-sectional widening, and
- wherein the strand sections are individually secured between the clamp and the core exclusively by ~~fictional~~ frictional clamping which is dependent on an amount the clamp is prestressed.

Claim 32. (Previously Presented) A brush sealing ring according to Claim 31, wherein the core is shaped from a metal wire with a round cross section and the clamping section is shaped from a metallic round tube which is slotted in the longitudinal direction.

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D) Claims 33-34 (Canceled)

Claim 35. (Previously Presented) A brush sealing ring according to Claim 31, wherein said rotor and stator are part of a turbo machine.

Claim 36. (Previously Presented) A brush sealing ring according to Claim 31, wherein said rotor and stator are part of an electric generator.

Claim 37. (Currently Amended) A method of making a sealing ring for sealing a space between a rotor and a stator, comprising:

fixing an annular seal housing to said stator,

placing a core in said annular seal housing with a plurality of fiber strand sections individually looped around the core which extend with end faces forming tangents with an annular face spaced from the core to sealing engage the rotor,

prestressing a clamp by elastic cross-sectional widening,

clamping the strand sections to the core by the prestressed clamp,

wherein the strand sections are formed exclusively of fine, angel hair aramid fibers, and

wherein the strand sections are individually secured between the clamp and the core exclusively by ~~fictional~~ frictional clamping which is dependent on an amount the clamp is prestressed.

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D / Claim 38. (Previously Presented) A method according to Claim 37,
wherein the core is shaped from a metal wire with a round cross section and the
clamping section is shaped from a metallic round tube which is slotted in the
longitudinal direction.

Claims 39-41 (Canceled)

Claim 42. (Previously Presented) A method according to Claim 37,
wherein said rotor and stator are part of a turbo machine.
